HRS COVER SHEET

FACILITY NAME: Brooklyn Union Gas- Williamsburg Works

EPA I.D. #: NYD 980532030

ORIGINAL PRIORITY: Low

REVIEWED BY: Amy Brochu

REASSESSED PRIORITY: NFRAP

REVIEWED BY: Carol DiGuardia

COMMENTS:

PREPARER: Carol A. DiGuardia DATE: 8/26/88

B.U.G - Williamsburg

HRS

	S	S^2
Groundwater Route Score (S_{gw})	0.80	0.64
Surface Water Route Score (S_{sw})	1.95	3.80
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		4.44
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		2.11
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M$		1.22

WORKSHEET FOR COMPUTING S_M

PRO

	S	S^2
Groundwater Route Score (S_{gw})	4.84	23.43
Surface Water Route Score (S_{sw})	8.62	74.30
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		97.73
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		9.89
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M$		5.72

WORKSHEET FOR COMPUTING S_M

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Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	HRS	Max. Score	PRO
1 Observed Release	(0) 45	1	0	45	0
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					
Depth to Aquifer of Concern	(0) 1 2 3	2	0	6	6
Net Precipitation	0 1 2 (3)	1	3	3	3
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	2
Physical State	0 1 2 (3)	1	3	3	3
Total Route Characteristics Score			8	15	14
3 Containment	0 (1) 2 3	1	1	3	3
4 Waste Characteristics					
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	18
Hazardous Waste Quantity	0 (1) 2 3 (4) 5 6 7 8	1	1	8	4
Total Waste Characteristics Score			19	26	22
5 Targets					
Ground Water Use	0 (3) 2 3	3	3	9	3
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	0
Total Targets Score			3	49	3
6 If line 1 is 45, multiply 1 x 4 x 5. If line 1 is 0, multiply 2 x 3 x 4 x 5			456	57.330	2772
7 Divide line 6 by 57.330 and multiply by 100		S_{gw} = 0.80			4.84

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Surface Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	HRS	Max. Score	PRO
1 Observed Release	(0) 45	1	0	45	0
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	0
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	2
Distance to Nearest Surface Water	0 1 2 (3)	2	6	6	6
Physical State	0 1 2 (3)	1	3	3	3
Total Route Characteristics Score			11	15	11
3 Containment	0 (1) 2 3	1	1	3	3
4 Waste Characteristics					
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	18
Hazardous Waste Quantity	0 (1) 2 3 4 5 6 7 8	1	1	8	3
Total Waste Characteristics Score			19	26	21
5 Targets					
Surface Water Use	0 1 (2) 3	3	6	9	6
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	2
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	0
Total Targets Score			6	55	8
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			1254	64,350	5544
7 Divide line 6 by 64,350 and multiply by 100	S_{sw} =		1.95		8.62

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Air Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multiplier	Score	Max. Score	Ref. (Section)
1 Observed Release	0	45	1	0	45	5.1
Date and Location:						
Sampling Protocol:						
If line 1 is 0, the S_a = 0. Enter on line 5 If line 1 is 45, then proceed to line 2						
2 Waste Characteristics						5.2
Reactivity and Incompatibility	0 1 2 3		1		3	
Toxicity	0 1 2 3		3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8		1		8	
	Total Waste Characteristics Score				20	
3 Targets						5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30		1		30	
Distance to Sensitive Environment	0 1 2 3		2		6	
Land Use	0 1 2 3		1		3	
	Total Targets Score				39	
4 Multiply 1 x 2 x 3					35,100	
5 Divide line 4 by 35,100 and multiply by 100			S_a =	0		

PRO 0

FIGURE 9
AIR ROUTE WORK SHEET